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Paul T. Bartone & Amy B. Adler

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Since the end of the Cold War, European-based US military forces have participated in a growing number of peacekeeping operations. For the past 3 years, the US Army Medical Research Unit-Europe has conducted field studies with a variety of units engaged in peacekeeping and contingency operations. The general research goal is to identify the key sources of stress in such operations, the impact on soldier health and adaptation, and factors that increase soldier vulnerability or resiliency under the stress of peacekeeping operations. This presentation will give selected findings from this research program, with an emphasis on US experience with United Nations operations in Croatia. Extensive interview, observation and survey data collected on a peacekeeping medical task force over time led to a conceptual model that describes the major domains of psychological stress in peacekeeping operations: Isolation, Ambiguity, Powerlessness, Boredom, and Threat. Also provided are some recommendations for countermeasures that may reduce the negative effects of peacekeeping stress.

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# A Model of Psychological Stress in Peacekeeping Operations<sup>1</sup>

Paul T. Bartone, Ph.D. & Amy B. Adler, Ph.D.

U.S. Army Medical Research Unit-Europe  
Walter Reed Army Institute of Research

## ABSTRACT

Since the end of the Cold War, European-based US military forces have participated in a growing number of peacekeeping operations. For the past 3 years, the US Army Medical Research Unit-Europe has conducted field studies with a variety of units engaged in peacekeeping and contingency operations. The general research goal is to identify the key sources of stress in such operations, the impact on soldier health and adaptation, and factors that increase soldier vulnerability or resiliency under the stress of peacekeeping operations. This presentation will give selected findings from this research program, with an emphasis on US experience with United Nations operations in Croatia. Extensive interview, observation and survey data collected on a peacekeeping medical task force over time led to a conceptual model that describes the major domains of psychological stress in peacekeeping operations: Isolation, Ambiguity, Powerlessness, Boredom, and Threat. Also provided are some early recommendations for countermeasures that may reduce the negative effects of peacekeeping stress.

<sup>1</sup>This report is based on research conducted with Mark A. Vaitkus, Ph.D. as collaborator. The views of the authors do not necessarily reflect those of the Department of the Army, or the Department of Defense (para 4-3, AR 360-5).

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Correspondence to:

BARTONEP@HEIDELBERG-EMH2.ARMY.MIL

# A Model of Psychological Stress in Peacekeeping Operations<sup>1</sup>

Paul T. Bartone, Ph.D. & Amy B. Adler, Ph.D.

The US Army Medical Research Unit-Europe (USAMRU-E), a field unit of the Walter Reed Army Institute of Research, conducts studies of stress and health among American soldiers who are stationed in Europe, and who deploy for "out-of-sector" peacekeeping and contingency operations. In this report, I will summarize our research findings from recent peacekeeping operations involving American forces in Europe, and present a working model of the underlying psychological stressors in peacekeeping operations that derives from these investigations.

The number of US forces stationed in Europe has decreased dramatically in recent years from over 300,000 at the time the Berlin Wall fell in 1989, to slightly over 100,000 today. The role of these forces has also changed from one of defense against possible Soviet aggression, to active participation in "out-of-sector" peacekeeping, contingency and humanitarian assistance missions. Just in the brief period from the end of the Gulf War in 1991 through 1993, the U.S. Army in Europe (USAREUR) participated in 42 real-world contingency missions, nearly all of which were peacekeeping or humanitarian in nature. This compares with only 29 such missions in the entire 44 years of the Cold War. Many of these missions are under United Nations' sponsorship, with some even placing U.S. forces under U.N. operational control. U.N.-sponsored military operations are also "multinational" in character, involving forces from many different nations.

Peacekeeping/contingency missions offer unusual social-psychological challenges and operational stressors for participating soldiers. How well military personnel adapt to the psychological stressors of operations like this is of critical importance both to mission success and to individual health and well-being. While some of the stressors are certainly familiar ones (e.g., family separation), there are likely to be new and unexpected stressors associated with peacekeeping missions. In order to plan effective programs for reducing and preventing the ill-effects of stress, and maintaining morale and mental health of troops and families, it is first necessary to develop a sound understanding of the nature of operational stressors at various phases of peacekeeping missions

While much is known about soldier stress and adaptation in more conventional military operations, the U.S. military has little experience with U.N. peacekeeping missions, and a poor understanding of the stressors associated with such operations. Most previous research has sought to understand combat-related psychiatric breakdown, attempting to identify causes and preventive measures (e.g., Belenky, 1987). To the extent peacekeeping and contingency operations expose soldiers to stressors that are different in nature from those of combat, most "combat psychiatry" studies are not directly relevant. Research is needed to delineate the sources and nature of stress on such operations, and to identify the possible health and performance consequences of

such stressors. How combat-trained soldiers adjust to this new role is of crucial importance to (1) organizational capability to contribute positively to such operations, (2) individual soldier health and well-being, and (3) overall continued readiness of military forces.

### US Army Medical Task Force in Croatia

In November 1992, the U.S. Army took up the mission of providing medical support to the 25,000 United Nations peacekeeping forces working in the former Yugoslavia. A Task Force of about 300 U.S. soldiers deployed from Germany for a six-month deployment. Researchers at the U.S. Army Medical Research Unit in Germany collected pilot data from this medical unit on a variety of human dimensions issues. In March 1993 another U.S. Army unit of about 200 soldiers (also from Germany) was identified as the next to deploy for this mission. Research with this second medical unit was more systematic and detailed than was possible for the first deployment. The unit included 186 medical personnel assigned to the Mobile Army Surgical Hospital (MASH), as well as additional personnel that were part of the larger Task Force. Using a longitudinal approach, the research aimed to identify the key sources of stress before, during, and after the deployment, and soldier perceptions of the multi-national operational environment. We also evaluated the impact of deployment stressors on soldier health, morale and cohesion, and sought to determine the resources and coping strategies that contribute to resiliency and psychological well-being in peacekeeping deployments.

### Method

Data collection with the 2nd U.S. MASH contingent began in the pre-deployment phase, during a two-week training period just prior to their actual deployment to Croatia. This included 74 semi-structured interviews and 188 self-report surveys completed by soldiers. The semi-structured interviews were done primarily on an individual basis, although a few were done in small groups of two to three soldiers. Extensive observations of key events were also conducted throughout this period, such as a command-sponsored unit leader seminar, and the immediate pre-deployment "lock-in" period and departure ceremony. Four data collection site-visits were made to the unit in Croatia over the course of the deployment, each lasting a week or more. The first visit covered the initial arrival and transition period, with subsequent visits about two and four months into the deployment. The third visit utilized a larger research team of four members, and included an administration of a mid-deployment survey to 128 soldiers (about 60% of the unit available), 37 semi-structured interviews and additional observations. The final visit occurred about two weeks prior to redeployment in early October 1993, and included a brief survey administered to 81 soldiers, or about 50% of the soldiers available at that time.

All surveys and interviews were voluntary and answers were anonymous. Using the mid-deployment survey as a reference point, the sample was 78% male, 70% white, and 23% officers (Table 1 contains additional sample demographics). A simultaneous study was conducted on the spouses of deployed soldiers in order to identify rear detachment and family issues. These results are presented elsewhere (Adler, Bartone, & Vaitkus, 1994).

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Insert Table 1 About Here

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## Results

### Pre-deployment

While built around an existing core element, the medical unit was specially constituted to perform the peacekeeping mission. Although it is common for deploying units to be specially tailored for a given mission, the situation was extreme for this unit due to the small size of the core element. Personnel for the unit, which increased in size from about 40 to 200 people, were drawn from a wide geographical area in Germany. There was considerable confusion early on regarding the composition of the unit. There was considerable turmoil for the soldiers, many of whom were complete strangers to each other. Also, many key leaders were new in their jobs and not yet known by the soldiers. A further complication was engendered by senior command disagreement on what the size of the unit should be in order to meet the mission. This critical question was not resolved until shortly before the actual deployment. Thus, many unit trainees were unsure about whether they would actually deploy or not. There was significant uncertainty associated with getting to know peers and leaders, and finding out who was going and when. Additional major stress factors in the pre-deployment phase included concerns about the Army drawdown and cuts, getting ready to deploy, changes in unit leadership, and family members (Table 2). There was substantial concern about the welfare of families during the separation, particularly for soldiers drawn from outlying areas. This concern was frequently related to the loss of services in some communities as a result of the drawdown of Army forces in Europe. Soldiers rated their personal morale somewhat higher than unit morale in this pre-deployment period.

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Insert Table 2 About Here

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## Early- and Mid-deployment

During the early- and mid-deployment phase, a critical stress factor was the lack of meaningful activities in which soldiers could engage. This was frequently described as "boredom." The daily patient population in the hospital was low, and travel restrictions prevented U.S. personnel from doing outreach and liaison work in any of the forward sectors. There was also a growing sense of isolation associated with the perceived lack of responsiveness from rear support elements to requests for supplies and replacement personnel. This was exacerbated by a lack of media attention to the UNPROFOR medical support mission. For many of the married soldiers, despite fairly good mail and telephone service, concern for families back home was a major issue. This concern was often linked to the poor attempts of some rear detachment elements to keep in touch with family members. Finally, many perceived an unfair distribution of rewards and resources, such as special U.N. pay, awards, supplies, and access to vehicles, leading to a sense of deprivation relative to soldiers from other nations, and, occasionally, to other American troops not assigned to the hospital. As regards individual stressors, the items of most concern included missing one's spouse, uncertainty about the unit's future location, and Army drawdown and cuts (Table 2). Both uncertainty and the drawdown were rated as more stressful than during the pre-deployment period. Lack of access to transportation and boredom were also reported to be stressors, perhaps related to a growing restlessness with the lack of perceived meaningful activities.

## Late-deployment

The key stressors in the final period, just two weeks before scheduled redeployment to Germany, also involved uncertainty and ambiguity. The unit's future location was still unknown, leaving many soldiers wondering where they would redeploy to, and if they would have to move their families. There was a continued sense of relative deprivation, and ambiguity about the mission itself and its value. While the opportunity to treat a small number of civilian "humanitarian" patients at the hospital was welcomed by the staff, it also led to increased questions about why more humanitarian medical care was not permitted. During this period there was also an increased security threat, as nearby targets came under Serbian artillery attack. This clearly increased tension levels for a time, although it had some positive effects as well with respect to the perception of the mission's importance. It added a sense of "the nearness of war" to the environment, and the greater media attention that followed was generally welcomed by the soldiers. The attack also appeared to increase or at least maintain unit cohesion, as soldiers worked together to strengthen perimeter defenses in the face of a common external threat. The general level and type of concerns seen during the mid-deployment persisted into the late-deployment phase (Table 2).



## Trends Over Time

Throughout the deployment, soldiers reported high levels of concern about the drawdown and its associated uncertainty for their units and families. Soldiers also reported high levels of stress associated with missing their spouses, boredom and restlessness. Thus, despite specific concerns relative to the deployment, general drawdown issues were a persistent stressful theme.

Drawing on survey data collected at the pre-deployment, mid-deployment, and late-deployment periods, unit cohesion was examined over time. Although a majority (53%) rated unit cohesion as moderate early on, few (22.5%) saw it as being high. Over time, those rating unit cohesion as high increased to 39%, but still relatively large groups saw unit cohesion as only moderate (41.6%) or low (19.5%). In interpreting these results it is important to remember that the medical support mission required a collection of specialized work sections with very different responsibilities, from clinical staff to motor pool workers to cooks to resupply technicians. The interview data reveal that cohesion levels were very high in some sections, but quite low in others. The fact that soldiers rated their personal morale as higher than their unit morale may reflect their ambivalence about their unit's effectiveness.

For morale, the interview data reveal that initial levels were influenced in part by an excitement and enthusiasm for the special medical peacekeeping mission, the "chance to make a difference," and the chance to implement training. Relatively lower levels over the course of the deployment may have been influenced by the lack of meaningful work activity. Still, interview data suggest that morale was preserved at reasonably high levels throughout perhaps partly as a function of the shared perception that key unit leaders were doing their best to care for soldiers, and keep them well-informed.

## Discussion

Most of the research conducted to date on the adaptation of American soldiers to peacekeeping has focused on acceptance of the peacekeeper role by soldiers (Segal, Harris, Rothberg, & Marlowe, 1984; Segal, Furukawa, & Lindh, 1990), and to a lesser degree on illness outcomes (Rothberg, Harris, Jellen, & Pickle, 1985). More recently, reports have appeared on the psychological stressors experienced by U.S. soldiers in Somalia (Gifford et al., 1993), and changes over time of soldier attitudes toward the soldier role (Miller & Moskos, 1994). A number of European studies have documented soldier responses to a variety of peacekeeping operations. These include examinations of the Norwegian experience in Lebanon (Headquarters Defence Command, 1993), the Dutch experience in Croatia (de Jong & Broedser, 1994), the French experience in the former Yugoslavia (Raphel & Bittel, 1994), and the German experience in Somalia (Kornhuber, 1994; Steege & Hansen, 1994). Comparisons

across these studies are made difficult by the diversity of situations examined, and by different designs and measures utilized. There is also a general lack of theoretical or conceptual models that might serve to organize our data and our thinking, identify commonalities, and perhaps point us in some new directions.

Table 3 summarizes the stressors for American soldiers over the course of the 6-month Croatia peacekeeping deployment. Descriptive lists like this are useful, but cannot be the stopping point in our efforts to understand the nature of stress in peacekeeping operations. While it is important to identify the entire range of stressors experienced by soldiers on peacekeeping and contingency operations, it is also necessary to go beyond such simple lists and seek to identify the underlying common dimensions. Such models are critical for organizing diverse data and how we think about it, and make it possible to specify the central issues that pertain across a variety of operations and units. By applying a conceptual analysis to all of the data available on the medical unit, including interviews, observations, and survey responses, several dimensions emerged as consistent areas of stress over the course of the deployment: Isolation, Ambiguity, Powerlessness, Boredom, and Threat (Table 4; Bartone & Adler, 1994). While this is a working model, it has already proven useful with other groups of deployed soldiers, and has led to some focused recommendations for countermeasures (Table 5). For example, the sense of isolation common to many peacekeeping operations can be countered with improved methods of communication and sharing of information, within the unit as well as with rear elements and families. Newsletters, media reports, telephone and electronic communications, and frequent command briefings are all useful counters to isolation during peacekeeping operations. Likewise, cohesion building activities take on added importance when units must function for extended periods in remote locations. Boredom on such mission comes primarily from there not being enough professionally meaningful work and activities to engage in. Recognizing this, recreation and entertainment activities are only minimally helpful as boredom countermeasures. On the other hand, activities that provide professional or personal growth and development should be highly effective. These might include correspondence courses of study, language development, and work exchange programs with other national forces in the area of operations. Future research will determine how well this model applies across a variety of peacekeeping and other military operations, and the value of suggested countermeasures for reducing psychological stress.



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Table 1

Sample Demographics, Croatia Medical Task Force

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GENDER	
Male	82 %
Female	18 %
RACE	
White	69 %
Black	16 %
Hispanic	8 %
AGE (Mean)	
	30
RANK	
Enlisted	31 %
NCOs	42 %
Officers	27 %
MARITAL STATUS	
Married	55 %
Single	27 %
Divorced	14 %
Separated	4 %
EDUCATION	
High School	19 %
Some College	41 %
College Degree	25 %
Graduate Degree	16 %

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N=128

Table 2  
Mean Stressor Ratings Over Time (MASH)

Stressors	Deployment Phase <sup>1</sup>		
	Pre- <sup>2</sup>	Mid- <sup>3</sup>	Late- <sup>4</sup>
Getting Ready to Deploy	2.62 (1.08)	---	---
Changes in Unit Leadership	1.92 (1.06)	1.87 (1.16)	1.91 (1.13)
Having to Move Family to US	1.94 (1.31)	1.81 (1.26)	2.20 (1.42)
Army Drawdown & Cuts	2.63 (1.31)	2.58 (1.47)	2.48 (1.51)
Not Knowing Where Unit Will be Based	---	3.13 (1.71)	2.31 (1.46)
Missing Spouse	---	3.18 (1.50)	3.06 (1.41)
Uncertainty About Where Family Will Live	1.63 (1.11)	2.55 (1.70)	2.05 (1.56)
Boredom	---	2.58 (1.43)	2.45 (1.22)
Lack of Ready Access to Transportation	---	2.43 (1.42)	2.47 (1.42)

<sup>1</sup>Rated on six-point Likert scale in terms of how much trouble or concern is caused by each stressor: 0=none, 1=very low, 2=low, 3=medium, 4=high, 5=very high. Some questions were not included in all versions of the questionnaires. These questions are marked by a line.

<sup>2</sup>N = 188.

<sup>3</sup>N = 128.

<sup>4</sup>N = 81.

Table 3

Summary of Stressors in Croatia Deployment

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1. Uncertainty (who is going, when deploy, when return, future of unit)
  2. Isolation... trouble communicating with home/family
  3. Ambiguous mission, unclear chain-of-command
  4. Travel restrictions (preventing forward delivery of medical services)
  6. Lack of support, supplies from Rear, higher Hqs
  7. Low media and public recognition of mission
  8. Relative deprivation (Others have things better than we do)
  9. Tedium, lack of meaningful professional activities
  10. Worries about family welfare
  11. Nagging doubts about value of mission (are we pawns?)
-

Table 4:

A Model of Psychological Stress in Peacekeeping Operations: STRESSORS

- ISOLATION:  
Physically Remote; Communication Difficult; Culturally Different;  
Newly Configured Units
- AMBIGUITY:  
Mission Definition; Command Structure Confusion  
Role Confusion (Soldier vs. Peacekeeper)
- POWERLESSNESS:  
Rules-of-Engagement Restrictions; Limited Activity;  
Cultural/Language Barriers; Relative Deprivation
- BOREDOM/TEDIUM:  
Repetition & monotony; Lack of professionally meaningful work;  
busywork, details  
Lack of variety in schedule & daily events
- THREAT/DANGER:  
Threat of Harm (Mines, Snipers, Disease);  
Psychological Threat (Exposure to Suffering)

Table 5

A Model of Psychological Stress in Peacekeeping Operations: COUNTERMEASURES

- ISOLATION:  
Activities, Cohesion & Communication (Information, Newsletters, Media)
- AMBIGUITY:  
•Rule, Role & Command Clarification (Communication)
- POWERLESSNESS:  
Clear Rules-of-Engagement, standardized benefits,  
accurate & timely information
- BOREDOM/TEDIUM:  
Creative Training; Exchange with other nations forces in AO;  
Provide professional and educational development opportunities;  
Schedule special events, holidays
- THREAT/DANGER:  
Provide sound training, equipment; health, safety & security policies;  
Keep soldiers well-informed about threat;  
Offer Regular “de-fuse” debriefings  
Maintain psychological distance from Local Nationals